

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 09/664,444A  
Source: 1FW/16  
Date Processed by STIC: 2/24/05

# ***ENTERED***



IFW16

## RAW SEQUENCE LISTING

DATE: 02/24/2005

PATENT APPLICATION: US/09/664,444A

TIME: 08:06:04

Input Set : A:\18003 SEQ 2005-02-16.txt

Output Set: N:\CRF4\02242005\I664444A.raw

3 <110> APPLICANT: Bell, John C.  
 4       Sonenberg, Nahum  
 5       Stojdl, David F.  
 6       Brown, Earl G.  
 7       Atkins, Harold L.  
 8       Marius, Ricardo M.  
 9       Lichty, Brian D.  
 10      Knowles, Shane B.  
 12 <120> TITLE OF INVENTION: ONCOLYTIC VIRUS  
 14 <130> FILE REFERENCE: 18003  
 16 <140> CURRENT APPLICATION NUMBER: US 09/664,444A  
 17 <141> CURRENT FILING DATE: 2000-09-18  
 19 <150> PRIOR APPLICATION NUMBER: 60/287,590  
 20 <151> PRIOR FILING DATE: 1999-09-17  
 22 <160> NUMBER OF SEQ ID NOS: 52  
 24 <170> SOFTWARE: PatentIn Ver. 2.1  
 26 <210> SEQ ID NO: 1  
 27 <211> LENGTH: 11  
 28 <212> TYPE: PRT  
 29 <213> ORGANISM: Artificial Sequence  
 31 <220> FEATURE:  
 32 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic  
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 40 <210> SEQ ID NO: 2  
 41 <211> LENGTH: 12  
 42 <212> TYPE: PRT  
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 45 <220> FEATURE:  
 46 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic  
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 51    1                   5                   10  
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 56 <212> TYPE: PRT  
 57 <213> ORGANISM: Artificial Sequence  
 59 <220> FEATURE:  
 60 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic  
 61      peptide

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65 1 5 10
68 <210> SEQ ID NO: 4
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70 <212> TYPE: PRT
71 <213> ORGANISM: Artificial Sequence
73 <220> FEATURE:
74 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
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77 <400> SEQUENCE: 4
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79 1 5
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83 <211> LENGTH: 9
84 <212> TYPE: PRT
85 <213> ORGANISM: Artificial Sequence
87 <220> FEATURE:
88 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
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92 Cys His Ser His His His Arg Gly Cys
93 1 5
96 <210> SEQ ID NO: 6
97 <211> LENGTH: 9
98 <212> TYPE: PRT
99 <213> ORGANISM: Artificial Sequence
101 <220> FEATURE:
102 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
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129 <220> FEATURE:
130 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic

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140 <212> TYPE: DNA
141 <213> ORGANISM: Vesicular stomatitis virus
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146 tacatcaata ctacaaaaag tttgtcagat ctaagaggat atgtctacca aggcctcaaa 180
147 tccggaaatg tatcaatcat acatgtcaac agctacttgt atggagcatt aaaggacatc 240
148 cggggtaagt tggataaaga ttggtcaagt ttcggaataa acatcgggaa agcaggggat 300
149 acaatcggaa tatttgacct tgtatccttg aaagccctgg acggcgctact tccagatgga 360
150 gtatcggatg cttccagaac cagcgcagat gacaaatggg tgcctttgta tctacttggc 420
151 ttatacagag tgggcagaac acaaatgcct gaatacagaa aaaagctcat ggatgggctg 480
152 acaaatcaat gcaaaatgat caatgaacag tttgaacctc ttgtgccaga aggtcgtgac 540
153 atttttgatg tgtggggaaa tgacagtaat tacacaaaaa ttgtcgctgc agtggacatg 600
154 ttcttccaca tgttcaaaaa acatgaatgt gcctcgttca gatacggaac tattgtttcc 660
155 agattcaaaag attgtgctgc attggcaaca tttggacacc tctgcaaaat aaccggaatg 720
156 tctacagaag atgtaacgac ctggatcttg aaccgagaag ttgcagatga aatgggtccaa 780
157 atgatgcttc caggccaaga aattgacaag gccgattcat acatgcctta tttgatcgac 840
158 tttggattgt cttctaagtc tccatattct tccgtcaaaa accctgcctt ccacttctgg 900
159 gggcaattga cagctcttct gctcagatcc accagagcaa ggaatgcccg acagcctgat 960
160 gacattgagt atacatctct tactacagca ggtttgttgt acgcttatgc agtaggatcc 1020
161 tctgccgact tggcacaaca gttttgtgtt ggagataaca aatacactcc agatgatagt 1080
162 accggaggat tgacgactaa tgcaccgcca caaggcagag atgtggtcga atggctcgga 1140
163 tggtttgaag atcaaaacag aaaaccgact cctgatatga tgcagtatgc gaaaagagca 1200
164 gtcatgtcac tgcaaggcct aagagagaag acaattggca agtatgctaa gtcagaattt 1260
165 gacaaatga                                     1269
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170 <212> TYPE: DNA
171 <213> ORGANISM: Vesicular stomatitis virus
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176 tacatcaata ctacaaaaag tttgtcagat ctaagaggat atgtctacca aggcctcaaa 180
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178 cggggtaagt tggataaaga ttggtcaagt ttcggaataa acatcgggaa ggcaggggat 300
179 acaatcggaa tatttgacct tgtatccttg aaagccctgg acgggtgtact tccagatgga 360
180 gtatcggatg cttccagaac cagcgcagat gacaaatggg tgcctttgta tctacttggc 420
181 ttatacagag tgggcagaac acaaatgcct gaatacagaa aaaggctcat ggatgggctg 480
182 acaaatcaat gcaaaatgat caatgaacag tttgaacctc ttgtgccaga aggtcgtgac 540
183 atttttgatg tgtggggaaa tgacagtaat tacacaaaaa ttgtcgctgc agtggacatg 600
184 ttcttccaca tgttcaaaaa acatgaatgt gcctcgttca gatacggaac tattgtttcc 660
185 agattcaaaag attgtgctgc attggcaaca tttggacacc tctgcaaaat aaccggaatg 720
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187 atgatgcttc caggccaaga aattgacaag gccgattcat acatgcctta tttgatcgac 840
188 tttggattgt cttctaagtc tccatattct tccgtcaaaa accctgcctt ccacttctgg 900
189 gggcaattga cagctcttct gctcagatcc accagagcaa ggaatgcccg acagcctgat 960
190 gacattgagt atacatctct tactacagca ggtttgttgt acgcttatgc agtaggatcc 1020
191 tctgctgact tggcacaaca gttttgtgtt ggagatagca aatacactcc agatgatagt 1080
192 accggaggat tgacgactaa tgcaccgcca caaggcagag atgtggtcga atggctcgga 1140
193 tggtttgaag atcaaaacag aaaaccgact cctgatatga tgcagtatgc gaaacgagca 1200
194 gtcatgtcac tgcaaggcct aagagagaag acaattggca agtatgctaa gtcagaattt 1260
195 gacaaatga 1269

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198 &lt;210&gt; SEQ ID NO: 11

199 &lt;211&gt; LENGTH: 1269

200 &lt;212&gt; TYPE: DNA

201 &lt;213&gt; ORGANISM: Vesicular stomatitis virus

203 &lt;400&gt; SEQUENCE: 11

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204 atgtctgtta cagtcaagag aatcattgac aacacagtca tagttccaaa acttcctgca 60
205 aatgaggatc cagtggaata cccggcagat tacttcagaa aatcaaagga gattcctctt 120
206 tacatcaata ctacaaaaag tttgtcagat ctaagaggat atgtctacca aggcctcaaa 180
207 tccggaaatg tatcaatcat acatgtcaac agctacttgt atggagcatt gaaggacatc 240
208 cggggtaagt tggataaaga ttggtcaagt ttcggaataa acatcgggaa ggcaggggat 300
209 acaatcggaa tatttgacct tgtatccttg aaagccctgg acggtgtact tccagatgga 360
210 gtatcggatg cttccagaac cagcgcagat gacaaatggg tgcctttgta tctacttggc 420
211 ttatacagag tgggcagaac acaaatgcct gaatacagaa aaaggctcat ggatgggctg 480
212 acaaatcaat gcaaaatgat caatgaacag tttgaacctc ttgtgccaga aggtcgtgac 540
213 atttttgatg tgtggggaaa tgacagtaat tacacaaaaa ttgtcgtctg agtggacatg 600
214 ttcttccaca tgttcaaaaa acatgaatgt gcctcgttca gatacggaac tattgtttcc 660
215 agattcaaaag attgtgctgc attggcaaca tttggacacc tctgcaaaat aaccggaatg 720
216 tctacagaag atgtaacgac ctggatcttg aaccgagaag ttgcagatga gatgggtcaa 780
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221 tctgctgact tggcacaaca gttttgtgtt ggagatagca aatacactcc agatgatagt 1080
222 accggaggat tgacgactaa tgcaccgcca caaggcagag atgtggtcga atggctcgga 1140
223 tggtttgaag atcaaaacag aaaaccgact cctgatatga tgcagtatgc gaaacgagca 1200
224 gtcatgtcac tgcaaggcct aagagagaag acaattggca agtatgctaa gtcagaattt 1260
225 gacaaatga 1269

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228 &lt;210&gt; SEQ ID NO: 12

229 &lt;211&gt; LENGTH: 1269

230 &lt;212&gt; TYPE: DNA

231 &lt;213&gt; ORGANISM: Vesicular stomatitis virus

233 &lt;400&gt; SEQUENCE: 12

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234 atgtctgtta cagtcaagag aatcattgac aacacagtca tagttccaaa acttcctgca 60
235 aatgaggatc cagtggaata cccggcagat tacttcagaa aatcaaagga gattcctctt 120
236 tacatcaata ctacaaaaag tttgtcagat ctaagaggat atgtctacca aggcctcaaa 180
237 tccggaaatg tatcaatcat acatgtcaac agctacttgt atggagcatt gaaggacatc 240
238 cggggtaagt tggataaaga ttggtcaagt ttcggaataa acatcgggaa ggcaggggat 300
239 acaatcggaa tatttgacct tgtatccttg aaagccctgg acggtgtact tccagatgga 360
240 gtatcggatg cttccagaac cagcgcagat gacaaatggg tgcctttgta tctacttggc 420
241 ttatacagag tgggcagaac acaaatgcct gaatacagaa aaaggctcat ggatgggctg 480

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242 acaaatcaat gcaaaatgat caatgaacag tttgaacctc ttgtgccaga aggtcgtgac 540
243 atttttggatg tgtggggaaa tgacagtaat tacacaaaaa ttgtcgctgc agtggacatg 600
244 ttcttccaca tgttcaaaaa acatgaatgt gcctcgttca gatacggaaac tattgtttcc 660
245 agattcaaaag attgtgctgc attggcaaca tttggacacc tctgcaaaat aaccggaatg 720
246 tctacagaag atgtaacgac ctggactttg aaccgagaag ttgcagatga gatgggtccaa 780
247 atgatgcttc caggccaaga aattgacaag gccgattcat acatgcctta tttgatcgac 840
248 tttggattgt cttctaagtc tccatattct tccgtcaaaa accctgcctt ccacttctgg 900
249 gggcaattga cagctcttct gctcagatcc accagagcaa ggaatgcccg acagcctgat 960
250 gacattgagt atacatctct tactacagca ggtttgttgt acgcttatgc agtaggatcc 1020
251 tctgctgact tggcacaaca gttttgttgt ggagatagca aatacactcc agatgatagt 1080
252 accggaggat tgacgactaa tgcaccgcca caaggcagag atgtggtcga atggctcgga 1140
253 tggtttgaag atcaaaacag aaaaccgact cctgatatga tgcagtatgc gaaacgagca 1200
254 gtcatgtcac tgcaaggcct aagagagaag acaattggca agtatgctaa gtcagaattt 1260
255 gacaaatga 1269

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258 &lt;210&gt; SEQ ID NO: 13

259 &lt;211&gt; LENGTH: 1029

260 &lt;212&gt; TYPE: DNA

261 &lt;213&gt; ORGANISM: Vesicular stomatitis virus

263 &lt;220&gt; FEATURE:

264 &lt;221&gt; NAME/KEY: modified\_base

265 &lt;222&gt; LOCATION: (1)..(1029)

266 &lt;223&gt; OTHER INFORMATION: "n" represents a, t, c, g, other or unknown

268 &lt;400&gt; SEQUENCE: 13

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269 tcaatcatat atgtcaacag ctacttgtat ggagcattga aggacatccg gggtaagttg 60
270 gataaagatt ggtcaagttt cggaataaac atcgggaagg caggggatac aatcggaata 120
271 tttgaccttg tatccttgaa agccctggac ggtgtacttc cagatggagt atcggatgct 180
272 tccagaacca gcgcagatga caaatgggtg cctttgtatc tacttggctt atacagagt 240
273 ggcagaacac aaatgcctga atacagaaaa aggctcatgg atgggctgac aaatcaatgc 300
274 aaaatgatca atgaacagtt tgaacctctt gtgccagaag gtcgtgacat ttttgatgtg 360
275 tggggaaatg acagtaatta cacaaaaatt gtcgctgcag tggacatgtt cttccacatg 420
276 ttcaaaaaac atgaatgtgc ctgcttcaga tacggaacta ttgtttccag attcaaagat 480
277 tgtgctgcat tggcaacatt tggacacctc tgcaaaataa ccggaatgtc tacagaagat 540
278 gtaacgacct ggatcttgaa ccgagaagtt gcagatgaga tgggtccaaat gatgcttcca 600
279 ggccaagaaa ttgacaaggc cgattcatat atgccttatt tgatcgactt tggattgtct 660
280 tctaagtctc catattcttc cgtcaaaaaac cctgccttcc acttctgggg gcaattgact 720
W--> 281 gacattgagt atacatctcn tactacagca ggtttgttgt acgcttatgc agtaggatcc 780
282 tctgctgact tggcacanca gttttgttgt ggagatagca aatacactcc agatgatagt 840
283 accggaggat tgacgactaa tgcaccgcca caaggcagag atgtggtcga atggctcgga 900
284 tggtttgaag atcaaaacag aaaaccgact cctgatatga tgcagtatgc gaaacgagca 960
285 gtcatgtcac tgcaaggcct aagagagaag acaattggca agtatgctaa gtcagaattt 1020
286 gacaaatga 1029

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289 &lt;210&gt; SEQ ID NO: 14

290 &lt;211&gt; LENGTH: 422

291 &lt;212&gt; TYPE: PRT

292 &lt;213&gt; ORGANISM: Vesicular stomatitis virus

294 &lt;400&gt; SEQUENCE: 14

295 Met Ser Val Thr Val Lys Arg Ile Ile Asp Asn Thr Val Ile Val Pro

296 1 5 10 15

298 Lys Leu Pro Ala Asn Glu Asp Pro Val Glu Tyr Pro Ala Asp Tyr Phe

RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 02/24/2005  
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Input Set : A:\18003 SEQ 2005-02-16.txt  
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:13; N Pos. 740,798  
Seq#:17; Xaa Pos. 247,266  
Seq#:37; N Pos. 144  
Seq#:42; Xaa Pos. 6,48  
Seq#:44; Xaa Pos. 430  
Seq#:49; N Pos. 3810,3831  
Seq#:51; Xaa Pos. 22,51  
Seq#:52; Xaa Pos. 1270,1277

**VERIFICATION SUMMARY**

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Input Set : A:\18003 SEQ 2005-02-16.txt

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L:281 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:720  
M:341 Repeated in SeqNo=13  
L:609 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:240  
M:341 Repeated in SeqNo=17  
L:1347 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:120  
L:1562 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:0  
M:341 Repeated in SeqNo=42  
L:1761 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:416  
L:2176 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49 after pos.:3780  
L:2638 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51 after pos.:16  
M:341 Repeated in SeqNo=51  
L:3214 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52 after pos.:1264